

Claims

1. A primary element for an electrical machine, having a magnetically conductive body, which is put together from laminations resting axially on one another and which has a plurality of axially extending teeth (15) disposed in a star pattern, and having a winding (12) of individual annular coils (17), which are wound separately as coil-body-less air coils and thrust radially onto the teeth (15), characterized in that on at least one face end of the magnetically conductive body, a compensation element (20) that is elastically deformable in the axial direction of the tooth (15) is placed onto each of the face ends (153), located in a transverse plane to the body axis, of the teeth (15), and the annular coil (17) thrust onto the tooth (15) is pressed axially onto this compensation element; and that all the compensation elements (20) are joined together via a closed ring element (19) to make a compensation mask (18).
2. The primary element as defined by claim 1, characterized in that one compensation mask (18) is provided on each face end of the magnetically conductive body.
3. The primary element as defined by claim 1 or 2, characterized in that parallel ribs (22) are embodied on the outer face, facing away from the tooth (15), of the compensation elements (20) and are disposed one above the other, spaced apart from one another, in the radial direction of the tooth (15).

4. The primary element as defined by one of claims 1 through 3, characterized in that the compensation element (20) has the shape of a U with a transverse strut (201) embodied in gable-like fashion and two short legs (202) of the U integrally extending from the transverse strut (201); and that the transverse strut (201) covers the face end (153) of the tooth (15), and the legs (202) of the U reach over the long sides (152), facing away from one another, of the tooth (15).

5. The primary element as defined by claim 4, characterized in that the ribs (22) are shaped in one piece from the gable-like transverse strut (201).

6. The primary element as defined by claim 4 or 5, characterized in that the gable-like transverse strut (201) is embodied such that between the gable faces and the face end (153) of the tooth (15), a spring travel (s) is present for resilient retraction of the transverse strut (201).

7. The primary element as defined by one of claims 1 through 6, characterized in that the ring element (19) is formed by a preferably thin-walled annular sleeve (21), from whose outer wall the compensation elements (20) protrude in a star pattern.

8. The primary element as defined by claim 7, characterized in that the annular sleeve (21) has a protruding portion (211), which protrudes axially past the transverse struts (201) of the compensation elements (20) and which, when annular coils (17) have been placed on the teeth (15), covers the undersides of the coil heads (171) of the annular coils (17).

9. The primary element as defined by claim 7 or 8, characterized in that the annular sleeve (21) and the compensation elements (20) are made in one piece as a plastic injection-molded part.

10. The primary element as defined by one of claims 1 through 9, characterized in that one insulation strip (23) each rests on the one hand between the long sides (152), facing away from one another, of the teeth (15) and on the other between the inner long sides, oriented toward the aforementioned long sides, of the annular coils (17) slipped onto the teeth (15).

11. The primary element as defined by claim 10, characterized in that one insulation strip (23) is secured, preferably glued on, to each of the inner long sides, oriented toward one another, of the annular coils (17).

12. The primary element as defined by claim 10 or 11, characterized in that the insulation strips (23) are angled, on the top side pointing outward of the annular coils (17), for the sake of covering these annular coils.

13. The primary element as defined by one of claims 1 through 12, characterized in that the magnetically conductive body has a hollow-cylindrical short-circuit yoke (14), which is slipped onto the outward-pointing, free tooth faces (154) of the teeth (15) equipped with the annular coils (17).